

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

10/521541

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/007227 A3

(51) International Patent Classification⁷: F16H 3/76, 3/44

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/KR2003/001386

(22) International Filing Date: 12 July 2003 (12.07.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2002-0041827 16 July 2002 (16.07.2002) KR

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(71) Applicant and

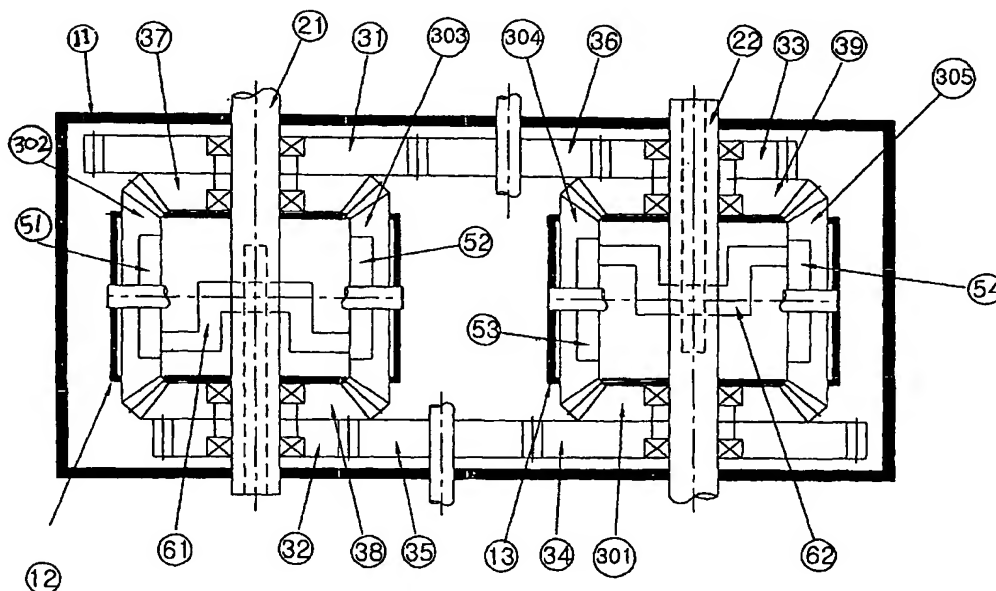
(72) Inventor: JO, Koang-Ho [KR/KR]; b-402 Cheong cheon green billra, 68-91 Cheong, Cheon-dong, Bupyeong-ku, Incheon-chi 403-030 (KR).

(88) Date of publication of the international search report:
1 April 2004

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: GEAR-TYPE CONTINUOUSLY VARIABLE TRANSMISSION



(57) Abstract: This invention relates to a gear-type continuously variable transmission, comprising a main shaft (21) and an auxiliary shaft (22), each formed with grooves in the center and hollow parts at a side; control gears (302, 303, 304, 305) provided with power distribution means; control casings (12, 13) including control levers (61, 62); ring gears (31, 32, 33, 34) having a transmission rate as transmission varying means; side gears (37, 38, 39, 301) attached to said ring gears; and idle gears (35, 36), wherein a casing supports said main shaft and said auxiliary shaft and said idle gears, and wherein one-way clutches are respectively provided to the gear lines at both sides of said main shaft and said auxiliary shaft.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR03/01386

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 F16H 3/76, F16H 3/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 F16H, B60K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
KR, JP: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 2000-12155 A (GU TAEK SEO) 06 March 2000 See the abstract and the figures	1 - 4
A	KR 2000-73560 A (JO JA YEON) 05 December 2000 See the abstract and the figures	1 - 4
A	JP 2000-16102 A (KUBOTA CORP.) 18 January 2000 See the abstract and the figures	1 - 4
A	JP 06-109089 A (ISHIBASHI AKIRA) 19 April 1994 See the abstract and the figures	1 - 4
A	EP 143365 A1 (TACKE KG F.) 05 June 1985 See the abstract and the figures	1 - 4
A	US 4,327,604 A (RIX E. EVANS) 04 May 1982 See the abstract and the figures	1 - 4

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family


Date of the actual completion of the international search

20 NOVEMBER 2003 (20.11.2003)

Date of mailing of the international search report

21 NOVEMBER 2003 (21.11.2003)

Name and mailing address of the ISA/KR

 Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Kwang Oh

Telephone No. 82-42-481-5452



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR03/01386

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 2000-12155 A	06.03.2000	NONE	
KR 2000-73560 A	05.12.2000	NONE	
JP 2000-16102 A	18.01.2000	NONE	
JP 06-109089 A	19.04.1994	NONE	
EP 0143365 A1	05.06.1985	DE3342047A1 EP0143365A1 JP60201149A	05.06.1985 05.06.1985 11.10.1985
US 4,327,604 A	04.05.1982	NONE	